The Coil Question Answered . . .

THE
COIL QUESTION
ANSWERED

THE B. & B. APPARATUS CO.
27 CENTRAL STREET
SALEM, MASS.
U. S. A.

INTRODUCTORY.

THE success with which our first catalogue of High Frequency Apparatus was received leads us to hand your herewith our second effort.

We have included in this catalogue all of the best articles found in our first issue, and have added thereto many new and attractive features.

We hope that our second catalogue will please you, and soliciting a continuance of your patronage, we are

Yours truly,

B. & B. Apparatus Co.

SYNOPSIS.

Portable High Frequency Coil.

Believing that the average physician realizes the need of having apparatus for generating high voltage electric currents at hand, we will devote the the limited space at our disposal in describing our Portable High Frequency Coils, etc.

The apparatus is the outcome of the researches into electricity conducted by Mr. Ralph C. Browne in his well appointed laboratory. Mr. Browne early turned his attention to portable high frequency apparatus believing that to be the most suited to physicians' general use, as time has since shown the case to be.

Manufacturers

Since the discovery of the X-Rays we have been perfecting and building portable high frequency apparatus which probably entitles us to the honor of being the first manufacturers of this class of apparatus in the United States.

High Efficiency.

Portable apparatus to be successful, we have found by experience, must comprise the following essential points. Light weight, symmetrical form, when closed having no projecting posts, etc., to become broken in transportation, great versatility of power, high efficiency, ready means of attaching to source of energy, and most important of all, the insulation (always the weakest part of high vol-

Readily Attached to Power.

tage apparatus) *must not be sacrificed to gain space,* for imperfect working, with ultimate breaking down is sure to result. Other manufacturers of portable apparatus have evidently not learned this lesson, which we have by experience, and are placing on the market machines in which everything has been sacrificed to gain space.

It should be noticed that owing to the peculiar construction of our portable coils, the high voltage portions are widely separated from each other when in use and therefore subjected to comparatively little electric strain. In fact the instruments when open are as large as the average cabinet type and make as fine an appearance.

Large Amount of Insulation Used.

This construction furthermore enables the same and even more insulation to be used than is found in cabinet instruments, and the power of the electric currents generated is greater than would be required for the heaviest radiographic work.

It is only when the apparatus is closed and not in use that the various parts are brought close together into a compact form.

There being no miles of fine wire, oils, liquids, motors, rheostats, etc., included in the construction of the instruments, freedom is had from the vexatious troubles often met with in more expensive and larger outfits.

A Burnt Out or Electrically Broken Down Coil Unknown.

A BURNED OUT, OR AN ELECTICALLY BROKEN DOWN COIL IS UNKNOWN IN OUR PRESENT IMPROVED TYPE OF APPARATUS. Several valuable attachments designed to be used in connection with and in most cases included in the equipment, are for the most part original with us, and comprise special Electrodes, Collapsable Fluoroscopes, Tube Shields, Static Transformers, Hand Oscillators, Pneumatic Switches, etc.

Pneumatic Switch.

The Pneumatic Switch deserves mention, enabling, as it does, the operator to have perfect control of the operation of the machine, even though both hands are engaged on the patient.

Perfect Control.

The frequency and voltage of the currents generated can be varied at will, making it possible to administer powerful currents to a patient without shocking. This control of the output is of greatest importance, and will be appreciated by all who have had experience in radiographic work.

Invite Comparison.

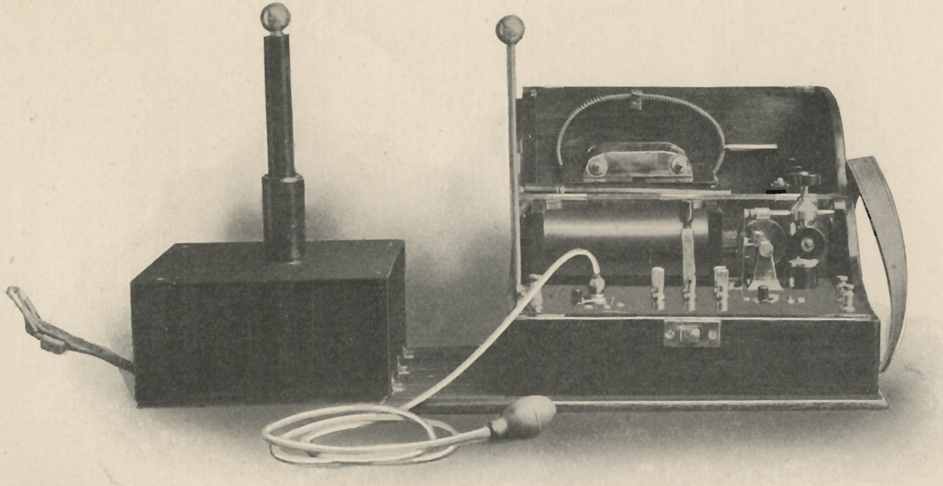
The aim in designing these portable coils has been to produce instruments having the highest possible efficiency, all points considered, and feeling that this has been accomplished, we cordially invite comparisons to be made between them and those that are made by any other manufacturer.

Readily Attached to Lighting Circuit.

To be brief, in the apparatus about to be illustrated we have retained the best features that have been devised in over ten years of experimental work, and have produced an equipment that can be as readily attached to an ordinary lighting circuit as a drop light or fan, of excellent appearance, and correct principles, making it suitable for all classes of electro-therapeutical work to which high voltage electricity is applicable.

Low Priced.

This great amount of experimental work has furthermore enabled us to place this apparatus on the market at a price within the reach of all.



TYPE UNIVERSAL (Open) FOR DIRECT OR ALTERNATING CURRENTS.

B. & B. COIL (UNIVERSAL).

The instrument shown on opposite page is a most complete portable apparatus.

Comprises:
- Hand Oscillator.
- Ozonating Electrode.
- General Electrodes.
- Portable Tube Stand.
- All necessary Hard Rubber Handles, Connecting Cords, Attaching Plugs, etc.

Operates on either ALTERNATING or DIRECT currents.

Finished in mahogany, antique or light oak.

Weight about 37 lbs. (Depending upon material of case.)

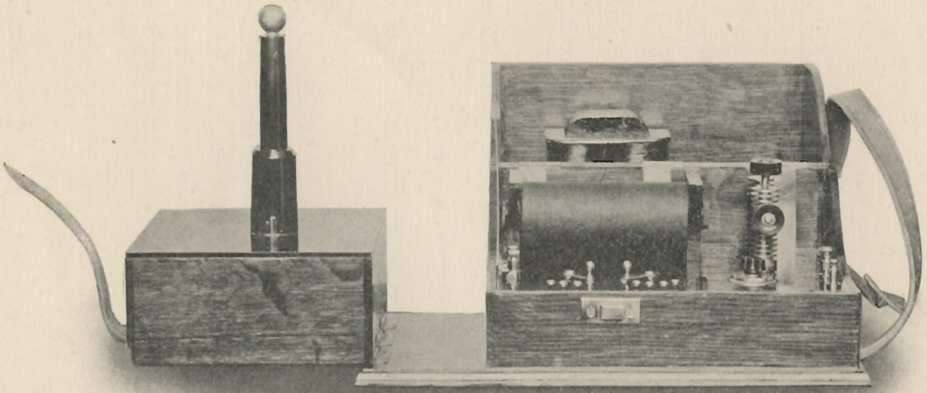
Size open 26 x 18 inches.

Size closed 16 x 8½ x 8½ inches or less than one cubic foot.

Owing to this apparatus operating on either Direct or Alternating currents, it is especially suited for use in cities where the available current is alternating in certain portions and direct in others, or where the current in the office varies or is different than that elsewhere in the city.

It is a very handsome instrument and no expense has been spared to make it as perfect as possible.

Price, ... 250.00



TYPE RELIANCE (Open). FOR ALTERNATING CURRENT.

B. & B. (RELIANCE).

THE neat simplified instrument shown on accompanying page is designed to meet the popular demand for a high grade, low priced outfit.

It is made in the same first class manner as the type Universal shown on page 6, but owing to its operating on Alternating currents only it is much simpler to build.

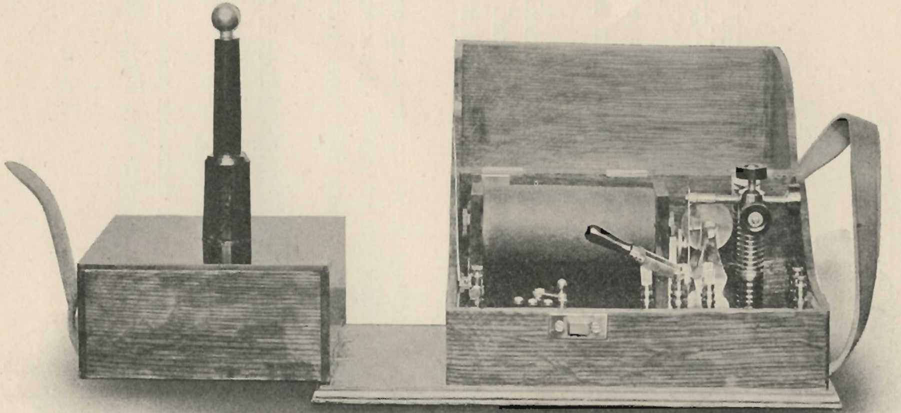
The construction has further been reduced by excluding the Pneumatic Switch, Hand Oscillator, etc., incorporated in the other apparatus. These devices may however be added at a slight additional expense if desired.

Only the best materials are used in its construction and it is guaranteed to do the best work. The versatility of currents generated are under perfect control, making it a most satisfactory instrument for general work.

It is especially recommended for hospital work, as in fact are all our portable instruments, as they enable radiographs and treatment to be made at the patient's bedside.

Furnished in antique or light oak complete with necessary Rubber Handles, Connecting Cords, Attaching Plugs, Portable Tube Stand, etc.

Price, 165.00 . . . . . .



TYPE CONSTANT (Open). FOR DIRECT CURRENT.

B. & B. COIL (CONSTANT).

THIS type of coil is much the same as the type Reliance shown on page 8 and is capable of the same general usage. It is designed to operate on Direct current. The circuit breaker is of peculiar design, and with a reasonable amount of care will give excellent service.

The currents produced are very smooth, and of considerable variety.

As built the apparatus does not include Pneumatic Switch, or Hand Oscillator. These accessories can however be added at slight additional expense if desired.

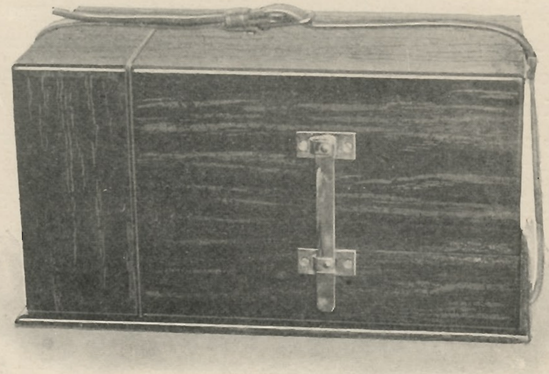
Ordinarily finished in antique or light oak.

Although not quite as simple as the Alternating apparatus, to operate, this instrument will be found of great benefit and will often pay for itself in one case.

It has the same general appearance as our other types, the heavy nickel plated mechanism mounted on polished rubber giving a most pleasing effect.

It is furnished complete with all necessary Connecting Cords, Rubber Handles, Electrodes, Attaching Plugs, Tube Stand, etc.

Price, ... 175.00



APPEARANCE OF B. & B. COIL (Closed).

PORTABILITY.

CLOSED.

The cut on opposite page shows the general appearance of our apparatus when closed for protection during transportation or from dust and dirt.

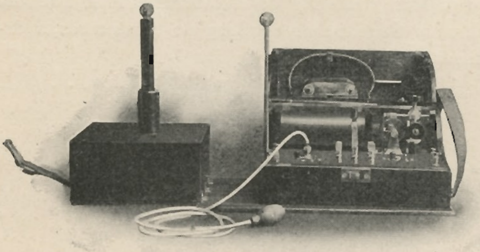
This feature will appeal to all having small offices, for when not in use, the apparatus occupies but very little space, and it is but a moments work to place it in commission.

Size closed 8½ x 8½ x 16 inches or less than one cubic foot.

The strap shown surrounding the case is for the purpose of carrying and holding the various parts firmly together as is also the metal clasp on the front of case.

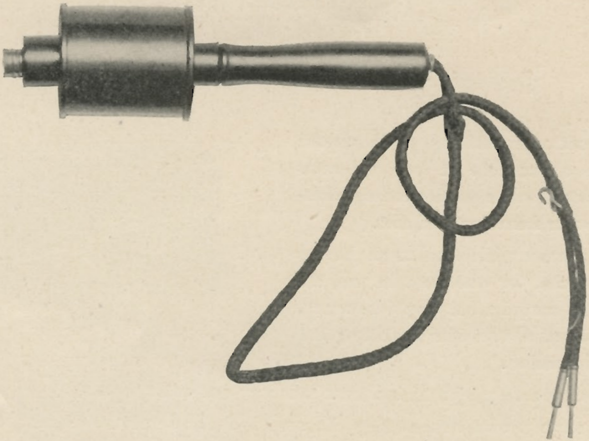
The small cuts on this page give comparative views of the instrument open and closed.

Being manufacturers of both classes of apparatus, we take the liberty of advising interested parties to purchase portable instruments rather than office, or as they are termed cabinet coils. For the portable instrument is applicable to as large a range of work as the cabinet type, and owing to the readiness with which it may be transported to a patient's home, capable of a much greater range of usefulness.



OPEN.

We can furnish if desired a nicely finished Mahogany, Antique or Light Oak table, having compartments for holding fluoroscopes, tubes, etc., to mount the apparatus on when in the office, making a very fine appearance.



HAND OSCILLATOR.

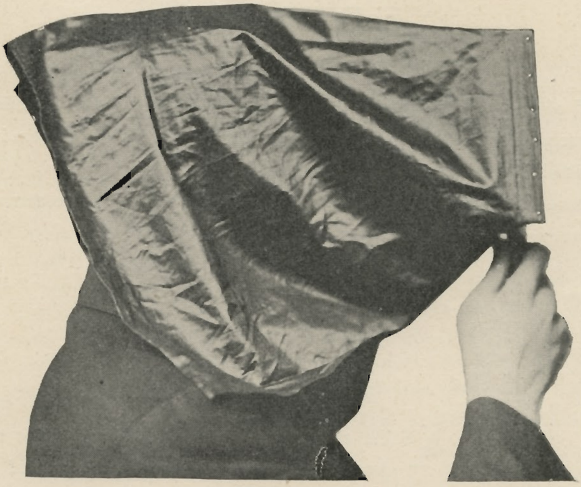
THIS unique little attachment is original with us and peculiar to our apparatus. It consists of a highly efficient transformer mounted in a polished hard rubber handle, which is also fitted with a coupling for holding any desired electrode.

By this construction the high voltage currents are generated in the handle from the comparatively low pressure electricity that is conducted to it from the rest of the apparatus. There is therefore no sparking on these cords, a defect common to other methods.

Price, ... 15.00

ULTRA VIOLET LAMP.

A lamp of simple design for generating Ultra Violet Rays of great power can be furnished, adapted to be operated by the coil. Price, ...



COLLAPSABLE FLUOROSCOPE IN USE.

COLLAPSABLE FLUOROSCOPE.

IT consists of a finely mounted Barium Platinum screen, under glass for protection, and a shadow cloth of suitable material adapted to be placed over the head when the instrument is in use.

This construction enables the view in the screen to be had to advantage, as it can be brought to or receded from the eyes as desired. There is no chance for light to leak in, or fringe to interfere with the eyes.

If desired the cloth may be thrown back from the screen so as to expose it to direct view, and shown to a number of persons simultaneously in a darkened room. Price, ... 12.50

OZONATING ELECTRODE.

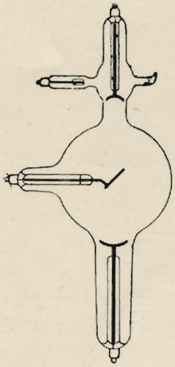
WHAT is termed the Ozonating Electrode comprises a metal ring of peculiar construction adapted to be attached to the active terminal of the coil for Ozonizing the air. With it the air of a large room may be strongly charged in a few minutes.

Price, ...

ELECTRODES.

ANY of the various types of electrodes may be used with the coils. We recommend and furnish glass with the apparatus believing them in many respects to be the best suited to general work.

We have many styles and types in stock and are always ready to manufacture special ones at a reasonable cost.



TUBES.

AS the currents generated by the apparatus are under perfect control, practically any type of Crooks tube may be utilized. We recommend, however, special High Frequency tubes.

These tubes are made both light and heavy, according to the class of work they are expected to do, and have always given excellent satisfaction.

Price, ... 15.00

TUBE STANDS.

WITH each instrument is furnished a portable tube stand of extremely simple design, which will be found suitable for much work.

We are also prepared to furnish if desired a more elaborate floor type stand, having heavy metal base and suitable clamps for firmly holding the tube.

Price, Table Stand, ...

Floor Stand, ...

PNEUMATIC SWITCH.

INCORPORATED in our Universal Coil and attached to the other types if ordered is a Pneumatic switch. This switch is a simple device operated by the compression of a bulb in a manner similar to that used in opening or closing a camera shutter. By its use the operator has complete control of the apparatus even though both hands are engaged on the patient, for the bulb operating the switch may be readily compressed by the foot, starting or stopping the instrument at will.

Owing to the connection between the bulb and the rest of the instrument being of rubber, there is no possibility of receiving the slightest sparking from the machine when starting or stopping, even though one hand is holding the electrode. Furthermore the electrode may be placed in position before the current of the coil is turned on, which is of great convenience in operating on a nervous patient. This switch must be attached to apparatus at the factory.

Price for attaching switch, ...

CABINET OR OFFICE INSTRUMENT.

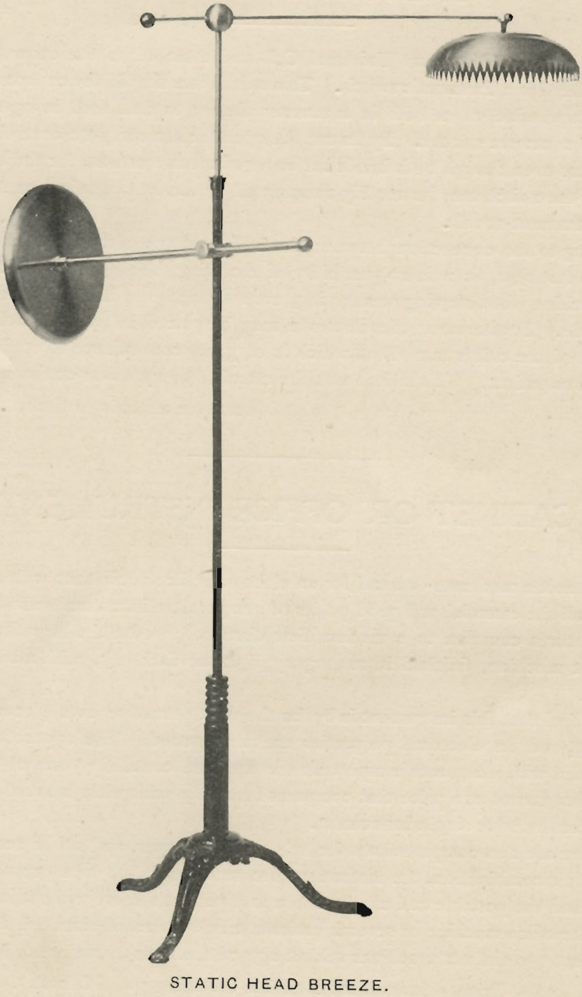
TO meet a moderate demand for an elaborate office outfit that will comprise all the essential and good points of our portable instruments as well as all the features common to a modern first class coil, we build a large handsome cabinet machine, finished in mahogany, light or dark oak, with marble trimmings.

We feel that this instrument is by far the most attractive ever placed on the market, and its electrical properties are unsurpassed. The apparatus can be furnished with a separate compartment in the base containing one of our portable instrument at a price that compares favorably with what is asked by other manufacturers for single instrument.

There are also compartments for tubes, fluoroscopes, and other accessories.

By this combination, the instrument becomes applicable to a great range of work and the portable coil can be taken to a patient's home without interfering with the office machine or several patients may be treated simultaneously. It is in fact two distinct machines sold at a price that was formerly asked for one.

Price of instrument complete including portable coil, ...
Price of office instrument alone, ...



STATIC HEAD BREEZE.

STATIC BREEZE.

A distinction should be made between the so-called Static Breeze and the electric Sprays, Brushes, etc., produced in such great abundance by coil apparatus, especially the portable High Frequency Coils.

These luminous sprays and brushes of electricity are sometimes erroneously styled static breezes, they are however entirely dissimilar, consisting as they do of a finely divided luminous discharge of electricity, while the static breeze on the contrary is not luminous, and consists of a current of air, repelled under the action of a free charge of static electricity of a fixed sign.

A few moments consideration of the character of a High Frequency or Alternating Current of electricity will show them to be entirely unsuited for producing a breeze. Owing to the rapidity with which the polarity of the current is changing, a current of a fixed sign is unable to act to any appreciable extent upon the surrounding air before its action is neutralized by a following wave of an entirely different sign.

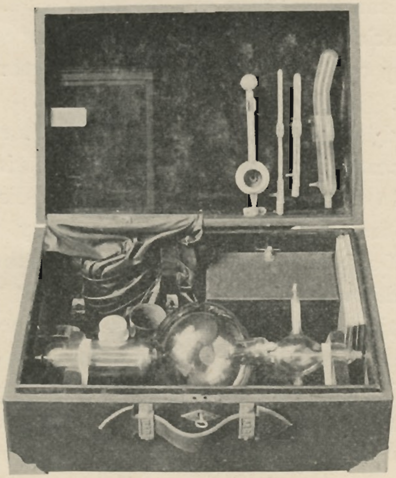
Brushes, sprays, etc., are produced in great abundance from our portable instruments. In order to create a Static Breeze use is made of the simple attachment shown on opposite page, which is designed to absorb or separate a portion of the electric waves that go to make up a spray or brush and transform it into static electricity, thus creating the desired breeze.

If desired the crown may be detached and leyden jars charged and other work peculiar to static electricity accomplished.

While we do not claim this attachment to be as powerful as a modern static machine it will be found of great convenience in many cases.

Price, ... 35.00

CARRYING CASE.



OPEN.

THE two cuts on this page illustrate our Carrying Case, designed for carrying necessary tubes, stands, plate holders, fluoroscope, attaching plugs, cords, electrodes, etc.

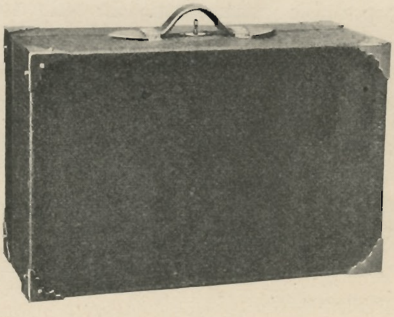
The outfit is so clearly shown in the views, little need be said regarding it.

The case is made of a strong light wood covered with first quality leatherette and brass mounted. It is fitted with lock, and handle for carrying.

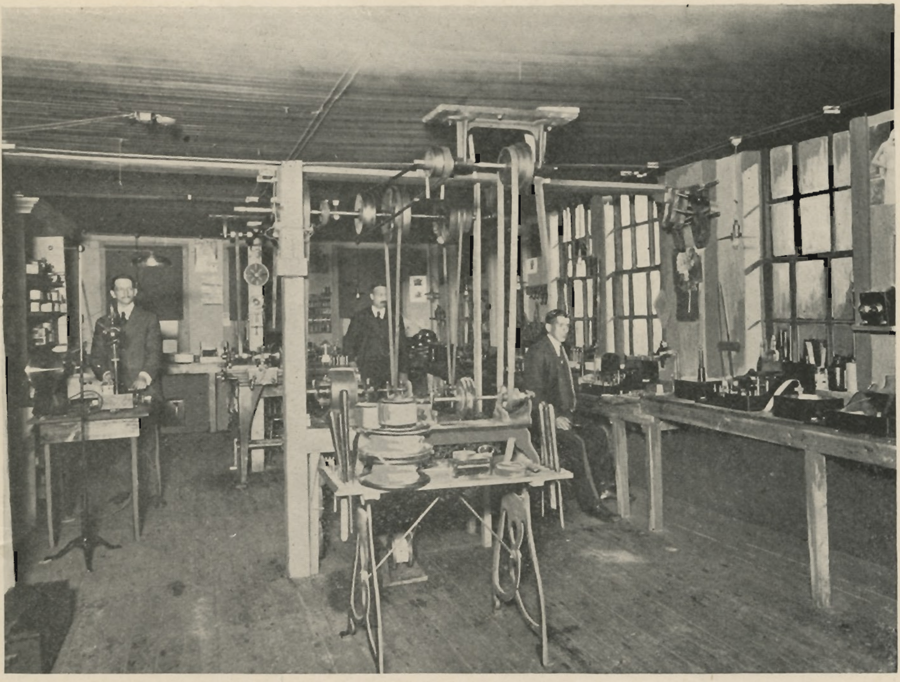
There are compartments for the various articles it is designed to carry, and insures against breaking tubes, etc., in transportation.

Price complete, ...
Including contents.

Price, case alone, ... 10.50



CLOSED.



Above cut shows a portion of the finishing and assembly room at our factory.

First class material, modern method and system together with personal supervision of men who have had years of experience all tend to place our apparatus in the highest class.

As a matter of protection to ourselves and our patrons we have applied for letters patent on all the instruments and accessories shown in this booklet. Several of these have been allowed, including patents covering the portable coils and various features incorporated therein.

Very truly,

B. & B. APPARATUS CO.,

Salem, Mass.

OUR GUARANTEE.

WE guarantee B. & B. Coils to be made of the best possible materials and that no instrument leaves our factory until it has been properly operated and tested, and will repair or replace any part found to be of faulty construction, providing the apparatus is returned to us prepaid within one year of date of purchase.

NOTICE.

Each and every instrument is sealed by a seal bearing our signature after it has been tested and before it leaves the factory. The seal is numbered and a record kept of the machine. We cannot be held responsible for the working of the apparatus if the said seal is broken.

TESTIMONIALS.

Lynn, Mass., May 26, 1906.

B. & B. Apparatus Co.,
Salem, Mass.

Gentlemen:—Replying to your favor of yesterday, I take pleasure in saying that I have used your Portable Coil, type universal, for the past year with entire satisfaction. I can cordially recommend the apparatus to my brother physicians.

J. G. Pinkham, M. D.

GALPIN'S
PHYSICIANS' AND SURGEONS' CHEMICAL AND MICROSCOPICAL LABORATORY,
55 West 57th Street, New York City.

New York, May 12, 1905.

Mr. R. C. Brown,
Salem, Mass.

Dear Mr. Brown:—It affords me pleasure at this time, after two years of constant experimentation with your two "high frequency coils" designed for me, to state after continued use, they have given me no trouble whatsoever in maintenance, and have given me the greatest economic efficiency ever experienced with any like electric apparatus with which I have had experience.

Very truly yours,

H. T. Galpin, Chemist.

THE CHENEY SANATORIUM,
62 Federal Street.

Salem, Mass., May 31, 1906.

B. &. B. Apparatus Co.,
Salem, Mass.

My dear Sirs:—In the two years that I have used the B. & B. Coil, it has given me perfect satisfaction in every respect. I have also been able to carry it on the electric cars, and treat patients six miles from my office.

Very truly yours,

George Z. Goodell, M. D.

MILO A. NEWHALL & CO.
PRINTERS.

B. & B.